

USEPA/OECA/OC
State and Tribal Assistance Grant (STAG) 2000-2001
New York: Measuring Compliance Assistance Outcomes in New York State
Proposal
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Enforcement and Compliance Assurance Assistance Agreements
Grant Proposal

I. Project Information

State and Department: New York State Department of Environmental Conservation, Pollution Prevention Unit

Title of Project: Measuring Compliance Assistance Outcomes in New York State

Focus Area: Compliance Assistance Outcome Measurement

Total Funds Requested from EPA: \$94,485

Total Project Cost (including state cash and in-kind contributions): \$136,925

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Preferred Assistance Agreement: Grant

II. Summary

Summary of the problem being addressed: The New York State Department of Environmental Conservation Pollution Prevention Unit (NYSDEC P2 Unit) manages a comprehensive pollution prevention/compliance assistance outreach program for the regulated community and the public. The P2 Unit conducts conferences and workshops, publishes guidance manuals, operates a toll-free hotline and an information clearinghouse, and provides public education programs and exhibits in many venues. In addition, since 1993 the P2 Unit has implemented an integrated facility management program, known as the M2P2 Program. This program brings together relevant environmental quality programs to provide a multi-media pollution prevention review and inspection at a facility. This review includes a comprehensive multi-media evaluation of compliance with environmental standards and an assessment of potential pollution prevention opportunities.

While implementing this pollution prevention/compliance assistance program, the P2 Unit has identified the need to measure the impact of its activities (or "Outputs"). Although communication and joint problem-solving among agency staff and with facility personnel has increased, no quantitative results have been available on P2 improvements or on compliance rates or compliance assistance program effectiveness. Thus, measures of success and of areas needing improvement have not been available for program improvement planning or for informing the public of improvement trends. For example, continued decreases in toxic releases in New York State (more than 70% from 1988 to 1998 for core reporting industries and chemicals as shown by the Toxic Release Inventory) may be due in part to P2, yet currently there is no comprehensive and/or readily accessible set of relevant and fully quality assured

information, nor fully developed assessment methodology to demonstrate the specific contributions that the P2 Unit has made to those reductions. Furthermore, the P2 Unit compliance assistance programs concentrate on working with small businesses, and reductions occurring from them are not captured by TRI, since most small businesses operate below the required TRI reporting levels.

The P2 Unit has identified the following problems that must be addressed in order to develop an infrastructure to measure the effectiveness of its compliance and technical assistance activities in terms of impacts on the regulated community and the environment:

- lack of clearly defined output measures and outcome measures,
- lack of supporting data or lack of easy access to pertinent existing data,
- the lack of a system for collecting output and outcome measures,
- lack of a system for analyzing outcome measures, and the
- lack of a system for presenting outcome measures.

Summary of project goals: The goal of this project is the development of a comprehensive infrastructure to be used by the P2 Unit to measure the impact of its compliance and technical assistance activities on the regulated community and the environment. Accomplishment of this goal will include developing appropriate output and outcome measures, collection of metrics data/information and transference of the outcome metrics system and metrics data to others.

Summary of project components: The P2 Unit will design and implement output and outcome measures and a supporting infrastructure for two activity areas: the M2P2 Program and the technical assistance workshops/manuals. For each activity area, the P2 Unit will 1) develop and use information collection instruments, procedures, techniques, 2) collect, record, quality assure/quality control (QA/QC), and validate information, 3) analyze, aggregate, and summarize collected information and 4) report results/make information generally accessible.

M2P2 Program Analysis: For the M2P2 Program, the P2 Unit will conduct a set of general analyses and site specific analyses of the approximately 160 facilities that have participated in the program. The general analyses will consist of a series of computer assisted “correlational” analyses using the BRS/TRI data systems and addressing 1) M2P2 facilities vs non-M2P2 Facilities’ waste/chemical generation/release changes that have occurred since 1993, regardless of when facilities were selected for the M2P2 Program, and 2) waste/chemical generation/release changes subsequent to M2P2 inspections and inspection report issuance. These results will be used to quantify waste/chemical generation/releases that can be attributed to the M2P2 Program.

The facility specific analyses will use follow-up surveys and site visits to 1) document clients’ awareness/understanding, behavior, environmental, and financial outcomes, 2) demonstrate (at least partial) causal links between the M2P2 Program and the clients’ awareness/understanding, behavior, environmental and financial outcomes, and 3) compare environmental outcomes reported by the survey for consistency with amounts reported in the BRS/TRI database.

Compliance/Technical Assistance Workshop/Manuals Analysis: Output/outcome measures will also be developed for the P2 Unit’s compliance and technical assistance workshops. Between 15 and 20 workshops are conducted by the P2 unit each year to educate

clients in selected industrial sectors and to distribute sector specific compliance and technical assistance manuals that are developed by the P2 Unit. The P2 Unit will distribute an Evaluation Form which will be filled out toward the end of a workshop and which will ask the attendee questions about the workshop. The results will be tabulated, summarized, and analyzed. A follow-up survey form (4-6 months after the workshop) will be developed and distributed to 1) find out if the manual was useful, 2) ask for Manual improvement suggestions, 3) determine if any additional improvement initiatives have been identified, 4) discover if any improvement initiatives are planned or being implemented, and 5) obtain information on actual/projected environmental or financial outcomes.

A second follow up survey will be distributed one to 1 ½ years after the workshop to identify client awareness/knowledge outcomes, client behavior outcomes, and to evaluate environmental and financial outcomes from implemented initiatives. If initiatives were not implemented, this will allow the P2 Unit to find out why they were not implemented or why anticipated benefits were not achieved.

The output and outcome measures (M2P2 Program, workshop/manuals and others) will be automated and re-formatted into a spreadsheet/database to assist in future measures efforts. The results of the M2P2 program and workshops/manuals initiatives will be analyzed to determine the effectiveness of these activities and to continuously improve these programs.

A final report on the project will be used to publicize the usefulness, effectiveness and transferability of the P2 Unit's output and outcome measures and the infrastructure for these measures. The final report will also be presented at various conferences and meetings. The results will also be shared with the Northeast Waste Management Officials Association (NEWMOA) P2 Metrics Menu Workgroup, of which the P2 Unit is a member.

Summary of how the project components will address the problem and attain the goals:

The above project components will result in effective output and outcome measures being established for use by the Pollution Prevention Unit. Also, completion of the project components will result in the establishment of a system for collecting, analyzing and presenting output and outcome measures. The establishment and implementation of the output/outcome measures system will allow the P2 Unit to measure the impact of its compliance/technical assistance activities on the regulated community and the environment. This information will be provided to the DEC Executive Office and other programs within the agency to assist in overall agency strategic planning and evaluation activities.

III. Work Plan

Proposed activities: The P2 Unit will design and implement output/outcome measures and reporting systems for two activity areas: the M2P2 Program and compliance/technical assistance workshops/manuals. This will include the following activities:

- Develop Complete Output/Outcome Measures Listing for P2 Unit
 - Define output and outcome measures that are relevant to the goals and objectives of the Pollution Prevention Unit and consistent with other states' metrics efforts, i.e. the NEWMOA states
 - Automate and re-format the measures into a spreadsheet/database to assist in

- future measurement efforts
- Establish Reporting System
 - Design information collection system and procedures that are comprehensible to users and audiences
 - Train employees on reporting system
- Implement Output/Outcome Measures for M2P2 Program
 - Conduct a series of computer assisted general “correlational” analyses using the BRS/TRI data systems. Gather data on M2P2 Program facilities and compare to non M2P2 Program facility data to determine output/outcome measures for the M2P2 Program. These output/outcome measures will be used to quantify generation/release reductions that can be attributed to the M2P2 Program.
 - Revise output/outcome measures as a result of general analyses
 - Conduct site specific analyses
 - Develop follow-up surveys to record output/outcome measures at facilities as described above, and develop procedures and techniques for distributing surveys
 - Distribute follow-up surveys to M2P2 Program facilities
 - Conduct site visits, phone calls for follow-up surveys
 - Record, QA/QC, and validate information
 - Analyze, aggregate, and summarize collected information
- Implement Output/Outcome Measures for Workshops/Manuals
 - Develop Workshop Evaluation Form and Survey Forms #1 and #2
 - Conduct workshops/distribute manuals
 - Provide and collect Evaluation Forms
 - Record, QA/QC, and validate information
 - Analyze, aggregate, and summarize collected information
 - Distribute follow-up survey form #1 (4-6 months after the workshop)
 - Record, QA/QC, and validate information
 - Analyze, aggregate, and summarize collected information
 - Distribute second follow up survey form #2 (1-1/2 years after the workshop) to find out client awareness/knowledge outcomes or client behavior outcomes and to evaluate environmental and financial outcomes from implemented initiatives
 - Record, QA/QC, and validate information
 - Analyze, aggregate, and summarize collected information
- Design and Implement Measures Database
 - Develop information storage and retrieval system, including standard reports
 - Make database publically accessible (initially alpha and beta test access to authorized users only) and transferable
- Report Results
 - A final report on the project will be used to publicize the effectiveness and transferability of outcome measures. The final report will also be presented at the Annual P2 Unit Conference.

Measures - How will the success of the project be measured: The project will be successful if the P2 Unit develops and implements output/outcome measures that are effective and relevant to

compliance assistance/P2 assistance programs. Effectiveness will be gauged by the ability of the P2 Unit to use the measures to characterize the state of compliance of targeted facilities, describe the environmental improvement results achieved at these facilities and assess the extent to which P2 Unit objectives are being addressed. Relevance will be gauged by the use of these measurements by other compliance assistance/P2 assistance offices.

Sharing results - How will the results of the project be shared across states: A final report on the project will be used to publicize the effectiveness and transferability of outcome measures. The final report will also be presented at the P2 Conference. Results will also be shared with the northeast states through NEWMOA, and other states through organizations such as the National Pollution Prevention Roundtable. Throughout the project, discussions will be held with EPA Region II's P2 and compliance assistance programs staff.

IV. Project Milestones: Duration of Project - 2 years

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| • Develop output/outcome measures for the M2P2 Program and workshops/manuals | Month 3 |
| • Establish reporting system and policy and procedures | Month 3 |
| • Implement output/outcome measures for M2P2 Program | |
| General analyses of M2P2 Program facilities | Month 6 |
| Revise output/outcome measures as a result of general analyses | Month 6 |
| Conduct site specific analyses | Month 6-14 |
| Analyze, aggregate, and summarize collected information | Month 18 |
| • Implement output/outcome measures for workshops/manuals | |
| Develop Evaluation Form and two Follow up Survey Forms | Month 3 |
| Conduct workshops/distribute manuals | Month 2-10 |
| Distribute two Follow-Up Survey Forms | Month 12-18 |
| Record, QA/QC, and validate information | Month 12-20 |
| Analyze, aggregate, and summarize collected information | Month 12-20 |
| • Design and implement measures database | Month 2 - 12 |
| • Report results/make collected information available | Month 24 |

V. Project Costs

	<u>EPA Cost</u>	<u>NYS Cost</u>
<u>Personal Services</u>		
Environmental Engineer I (50% for 2 years) (\$49,053, fringe- \$15,010, indirect-\$22,422)	\$86,485	
Senior Administrative Analyst (25% for 2 years) (\$22,370, fringe-\$6,845, indirect-\$10,225)		\$39,440
<u>Equipment</u>		
1 Laptop Computer to access database on site visits	\$3,000	
<u>Travel</u>		
Site Visits Statewide (Up to 25)	\$5,000	
<u>Supplies</u> (State Contribution)		\$3,000
Total	\$94,485	\$42,440